



## REPLY TO OFFICE ACTION numbers dated 6/1/2005

1. The Listing of references in specification is not a proper information disclosure: Accepted
2. Claims 7-18 are objection to under 37 CFR 1.759(c) as being improper dependent: Accepted
3. Claims 5-18 are objected: Appropriate correction made (please refer to attached amended application page one of amended patent application).
4. Regarding action 4 examiner states that USC 102 applies in this case. My response is that my particular invention although very similar to Sussel Howard U. S. Patent 4,170,036, I have modified my claims and pointed out the uniqueness of my invention compared with Sussel invention in more clear and more narrow terms such that 35 USC 101 which states regarding **Inventions patentable.**

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Since my invention is useful improvement thereof over Sussel's invention I may obtain a patent. Further due to modification of claims where I have removed the jewelry claim and other amendments 35 USC 102 is not applicable in this case.

**Improvement of Sussel Patent and possible claim of New Novel features.**

Please refer to my provisional patent application number 60410019 page 19 titled Final Product design and Bill of Material for 3 models

The Circuit diagram created by Phil Nash (this amendment to include him as co-inventor) based on my specifications consist of 16 female SIP sockets of which SIP socket number 1 through 8 are ground. SIP socket A, B, C, D, E, F, G, H consist of positive voltage. When a Bi-color LED's first terminal is connected to any of the ground socket labeled 1 through 8 and second terminal is connected to any of the voltage terminal labeled A through H the LED displays first color. When the polarity is revised the LED displays the second color. This is the novelty the ability to display multiple colors in the same circuit design. Sussel patent does mention the use of male female connectors however the battery casing and enclosed design does not allow the florist plug in the LED readily. Further my invention allows changing the connectors (SIP Sockets) to display multiple colors using same bi-color LEDs and same circuit design. Other difference is Sussel uses LM3909 chip IC Chip design by National Semiconductor and my invention uses LM324 chip also design by National Semiconductor. From the datasheet prepared by National Semiconductor it states that:

The LM3909 is a monolithic oscillator specifically designed to flash Light Emitting Diodes. By using the timing capacitor for voltage boost, it delivers pulses of 2 or more volts to the LED while operating on a supply of 1.5V or less. The circuit is inherently self-starting, and requires addition of only a battery and capacitor to function as an LED flasher.

And from the datasheet of National Semiconductor of LM324  
The LM324 series are low-cost, quad operational amplifiers with true differential inputs. They have several distinct advantages over standard operational amplifier types in single supply applications. The quad amplifier can operate at supply voltages as low as 3.0 V or as high as 32 V with quiescent currents about one-fifth of those associated with the MC1741 (on a per amplifier basis). The common mode input range includes the negative supply, thereby eliminating the necessity for external biasing components in many applications. The output voltage range also includes the negative power supply voltage.

LM324 is a Quad operational Amplifier chips that provide a PUSH-PULL output to reverse the polarity of the supply to LEDs. The Push and Pull mechanism also allows us to display dual color of the Bi-polar LEDs example if the first terminal is connected to any SIP socket A through D and Second LED terminal is connected to any SIP socket E through H the LED will alternate between the two colors due to Push and Pull mechanism of the LM324 Chip set

This is not possible to achieve with LM3909 so this is another novelty feature not covered by Sussel's invention. Sussel does mention that even though he chooses to solder 22 to 34, 36 he implies that it is understood that the set of free ends 22 and the terminals of the printed circuit board may be connected electrically by any of the known expedients such as by means of male and female connecting elements (column 3 lines 59-63). However these male or female connecting elements do not account to change the color of the LED and my invention does. Making it is unique and novel item different from Sussel's invention patent 4,170,036 and hence 35 U.S.C. 102(b) does not apply in this case.

5. Sussel mention (column 4 lines 55-60) *Referring to FIGS. 6 and 7 it will be understood that the integrated circuit, battery, capacitor and diodes are all commercially available components which are electrically interconnected as shown by means of printed circuit board 32. In the schematic of FIG. 7 it is possible to also incorporate an external resistor to shunt the internal RC resistors of the chip between appropriate pins thereof. The flashing rate of the circuit can be increased in this manner. Other circuit modifications are also possible, as will be apparent to persons versed in the art, in order to adapt the circuit to the intended use and there appears to be no reason to unnecessarily encumber the present disclosure in this respect. It will further be recognized that the circuit of FIG. 7 draws less current than the circuit of FIG. 6. Other circuit arrangements are shown and discussed in the publication of National Semiconductor Corp., Application Note AN-154, pages AN 154-1 and AN-154-2 by Peter Lefferts, December, 1975.*

This is a 16 page document in which Peter talk about how LM3909. The LM3909 chip is no longer made by National Semi-conductor. My invention uses LM324 This has many improvements over LM3909.

- Short Circuited Protected Outputs
- True Differential Input Stage
- Single Supply Operation: 3.0 V to 32 V (LM224, LM324, LM324A)
- Low Input Bias Currents: 100 nA Maximum (LM324A)
- Four Amplifiers Per Package
- Internally Compensated

- Common Mode Range Extends to Negative Supply
- Industry Standard Pinouts
- ESD Clamps on the Inputs Increase Ruggedness without Affecting
- Device Operation
- 14-pinout

For LM3909

- Operation over one year from one C size flashlight cell
- Bright, high current LED pulse
- Minimum external parts
- Low cost
- Low voltage operation, from just over 1V to 5V
- Low current drain, averages under 0.5 mA during
- battery life
- Powerful; as an oscillator directly drives an 8X speaker
- Wide temperature range
- 8-pinout

Please refer to 4 above to see how claims 1, 3, 5, 12,13,18 are NOT applicable since my invention is improvement over Sussel's invention

6. 35 U.S.C. 103(a) rejection of claims and since my invention is improvement over Sussel invention the rejection do not apply.

7. *Claim 2 is rejected under 35 U.S.C. 103(a) as being un-patentable over Sussel in View of Wainwright et al (U.S. Patent 6,217,188 B1).*

Wainwright et al (US patent 6,217,188 B1) has many conceptual similarities to my invention hence I have narrowed down my scope and claims to include only those item that are unique to my invention such as SIP socket, Power source attached directly to the printed circuit board. However I would also like to point out the difference between my invention and Wainwright et al invention 6,217,188B1. My invention uses Bi-color LED with two terminals Wainwright et al uses Tri-color LED with four terminals, Also he never mentions the circuit as it is not part of the invention. I have made changes in my patent to mention the circuit that was included in the original provisional application. His invention may be ideal for desktop cannot be modified to be used by florist unless it incorporated my invention in it. Programmable EPROM or Software embedded logic is costly and not practical to be included in flower bouquet especially live floral arrangements.

8. *Claims 4 8 are modified and 9 removed*

9. *Claims 6 7 and 8 are removed*

10. *Claims 10 is removed*

11. *Claim 11 is removed*

12. *Claim 14 is removed*

13. *Claims 15 is removed*

14. *Claim 17 is removed*

15. *Claim 18 is removed*